WHAT IS CLAIMED IS:

1. A semiconductor nanocrystal, where the nanocrystal is surface-coordinated with a compound containing a photosensitive functional group.

2. The semiconductor nanocrystal according to claim 1, wherein the compound containing a photosensitive functional group is represented by Formula 1 below:

X-A-B (1)

wherein X is NC-, HOOC-, HRN-, POOOH-, RS- or RSS- (in which R is a hydrogen atom or a $C_{1\sim10}$ saturated or unsaturated aliphatic hydrocarbon group); A is a direct bond, an aliphatic organic group, a phenylene group or a biphenylene group; and B is an organic group containing at least one carbon-carbon double bond, which may be substituted with at least one group selected from the group consisting of -CN, -COOH, halogen groups, $C_{1\sim5}$ halogenated alkyl groups, amine groups, $C_{6\sim15}$ aromatic hydrocarbon groups, and $C_{6\sim12}$ aromatic hydrocarbon groups substituted with F, Cl, Br, a halogenated alkyl group, R'O- (in which R' is a hydrogen atom or a $C_{1\sim5}$ alkyl group), -COOH, an amine group or $-NO_2$.

3. The semiconductor nanocrystal according to claim 2,

wherein the aliphatic organic group in the moiety A of Formula 1 is a saturated aliphatic hydrocarbon group, an aliphatic ester group, an aliphatic amide group, an aliphatic oxycarbonyl group or an aliphatic ether group.

4. The semiconductor nanocrystal according to claim 2, wherein the moiety B in Formula 1 is an organic group represented by Formula 2 below:

$$-CR_1=CR_2R_3 \quad (2)$$

wherein R_1 is a hydrogen atom, -COOH, a halogen group, a C_{1-5} alkyl group or a halogenated alkyl group; and R_2 and R_3 are each independently a hydrogen atom, a C_{1-30} alkyl group, -CN, -COOH, a halogen group, a C_{1-5} halogenated alkyl group, a C_{2-30} unsaturated aliphatic hydrocarbon group containing at least one carbon-carbon double bond, a C_{6-12} aromatic hydrocarbon group substituted or unsubstituted with F, Cl, Br, hydroxyl, a C_{1-5} halogenated alkyl group, an amine group, R'O-, in which R' is a C_{1-5} alkyl group, -COOH or $-NO_2$.

5. The semiconductor nanocrystal according to claim 2, wherein the photosensitive compound is selected from a group consisting of acrylic acid compounds, unsaturated fatty acid compounds, cinnamic acid compounds, vinylbenzoic acid compounds, acrylonitrile-based compounds, unsaturated nitrile-

based compounds, unsaturated amine compounds and unsaturated sulfide compounds.

6. The semiconductor nanocrystal according to claim 2, wherein the photosensitive compound is selected from a group consisting of methacrylic acid, crotonic acid, vinylacetic acid, tiglic acid, 3,3-dimethylacrylic acid, trans-2-pentenoic acid, 4-pentenoic acid, trans-2-methyl-2-pentenoic acid, 2,2-dimethyl-4-pentenoic acid, trans-2-hexenoic acid, trans-3-hexenoic acid, 2-ethyl-2-hexenoic acid, 6-heptenoic acid, 2-octenoic acid, citronellic acid, undecylenic acid, myristoleic acid, palmitoleic acid, oleic acid, elaidic acid, cis-11-elcosenoic acid, euric acid, nervonic acid, trans-2,4-pentadienoic acid, 2,4-hexadienoic acid, 2,6-heptadienoic acid, geranic acid, linoleic acid, 11,14-eicosadienoic acid, cis-8,11,14-eicosatrienoic acid, arachidonic acid, cis-5,8,11,14,17-eicosapentaenoic acid, cis-4,7,10,13,16,19-docosahexaenoic acid, fumaric acid, maleic acid, itaconic acid, ciraconic acid, mesaconic acid, trans-glutaconic acid, trans-beta-hydromuconic acid, trans-traumatic acid, trans-muconic acid, cis-aconitic acid, trans-aconitic acid, cis-3-chloroacrylic acid, trans-3-chloroacrylic acid, 2-bromoacrylic acid, 2-(trifluoromethyl)acrylic acid, trans-styrylacetic acid, trans-cinnamic acid, α-methylcinnamic acid, 2-methylcinnamic acid, 2-fluorocinnamic acid, 2-

(trifluoromethyl)cinnamic acid, 2-chlorocinnamic acid, 2-methoxycinnamic acid, 2-hydroxycinnamic acid, 2-nitrocinnamic acid, 2-carboxycinnamic acid, trans-3-fluorocinnamic acid, 3-(trifluoromethyl)cinnamic acid, 3-chlorocinnamic acid, 3-bromocinnamic acid, 3-methoxycinnamic acid, 3-hydroxycinnamic acid, 3-nitrocinnamic acid, 4-methylcinnamic acid, 4-fluorocinnamic acid, trans-4-(trifluoromethyl)-cinnamic acid, 4-chlorocinnamic acid, 4-bromocinnamic acid, 4-methoxycinnamic acid, 4-hydroxycinnamic acid, 4-nitrocinnamic acid, 3,3-dimethoxycinnamic acid, 4-vinylbenzoic acid, allyl methyl sulfide, allyl disulfide, diallyl amine, oleylamine, 3-amino-1-propanol vinyl ether, 4-chlorocinnamonitrile, 4-methoxycinnamonitrile, 3,4-dimethoxycinnamonitrile, 4-dimethylaminocinnamonitrile, acrylonitrile, allyl cyanide, crotononitrile, methacrylonitrile, cis-2-pentenenitrile, trans-3-pentenenitrile, 3,7-dimethyl-2,6-octadienenitrile and 1,4-dicyano-2-butene.

7. The semiconductor nanocrystal according to claim 1, wherein the semiconductor nanocrystal comprises CdS, CdSe, CdTe, ZnS, ZnSe, ZnTe, HgS, HgSe, HgTe, GaN, GaP, GaAs, InP, InAs or a mixture thereof.

8. The semiconductor nanocrystal according to claim 7, wherein the semiconductor nanocrystal comprises at least two

compounds selected from the group consisting of CdS, CdSe, CdTe, ZnS, ZnSe, ZnTe, HgS, HgSe, HgTe, GaN, GaP, GaAs, InP and InAs, and is a uniformly mixed type, gradiently mixed type, core-shell type or ally type.

9. A photosensitive composition for a semiconductor nanocrystal pattern, the composition comprising i) semiconductor nanocrystals, and ii) a photocurable compound.

10. The photosensitive composition according to claim 9, wherein the semiconductor nanocrystals are semiconductor nanocrystals surface-coordinated with a compound represented by Formula 1 below:

X-A-B (1)

wherein X is NC-, HOOC-, HRN-, POOOH-, RS- or RSS-, in which R is a hydrogen atom or a $C_{1\sim10}$ saturated or unsaturated aliphatic hydrocarbon group; A is a direct bond, an aliphatic organic group, a phenylene group or a biphenylene group; and B is an organic group containing at least one carbon-carbon double bond, which may be substituted with at least one group selected from the group consisting of -CN, -COOH, halogen groups, $C_{1\sim5}$ halogenated alkyl groups, amine groups, $C_{6\sim15}$ aromatic hydrocarbon groups, and $C_{6\sim12}$ aromatic hydrocarbon groups substituted with F, Cl, Br, a halogenated alkyl group,

R'O-, in which R' is a hydrogen atom or a C_{1-5} alkyl group, -COOH, an amine group or $-NO_2$.

11. The photosensitive composition according to claim 9, wherein the photocurable compound is selected from a group consisting of polymers containing acryl and/or vinyl group and ether-based compounds.

12. The photosensitive composition according to claim 9, wherein the photocurable compound is selected from a group consisting of multifunctional acrylate-based compounds, multifunctional polyalkyleneoxide compounds and a polysiloxanes containing at least one acryl and/or vinyl group.

13. The photosensitive composition according to claim 12, wherein the photocurable compound is selected from a group consisting of allyloxylated cyclohexyl diacrylate, bis(acryloxy ethyl)hydroxyl isocyanurate, bis(acryloxy neopentylglycol) adipate, bisphenol A diacrylate, bisphenyl A dimethacrylate, 1,4-butanediol diacrylate, 1,4-butanediol dimethacrylate, 1,3-butyleneglycol diacrylate, 1,3-butyleneglycol dimethacrylate, dicyclopentanyl diacrylate, diethyleneglycol diacrylate, diethyleneglycol dimethacrylate, dipentaerythirol hexaacrylate, dipentaerythirol monohydroxy

pentacrylate, ditrimethylolprpane tetraacrylate, ethyleneglycol dimethacrylate, glycerol methacrylate, 1,6-hexanediol diacrylate, neopentylglycol dimethacrylate, neopentylglycol hydroxypivalate diacrylate, pentaerythritol triacrylate, pentaerythritol tetraacrylate, phosphoric acid dimethacrylate, polyetyleneglycol diacrylate, polypropyleneglycol diacrylate, tetraethyleneglycol diacrylate, tetrabromobisphenol A diacrylate, triethyleneglycol divinylether, triglycerol diacrylate, trimethylolpropane triacrylate, tripropyleneglycol diacrylate, tris(acryloxyethyl)isocyanurate, phosphoric acid triacrylate, phosphoric acid diacrylate, acrylic acid propargyl ester, vinyl terminated polydimethylsiloxane, vinyl terminated diphenylsiloxane-dimethylsiloxane copolymer, vinyl terminated polyphenylmethylsiloxane, vinyl terminated trifluoromethylsiloxane-dimethylsiloxane copolymer, vinyl terminated diethylsiloxane-dimethylsiloxane copolymer, vinylmethylsiloxane, monomethacryloyloxypropyl terminated polydimethyl siloxane, monovinyl terminated polydimethyl siloxane and monoallyl-mono trimethylsiloxy terminated polyethylene oxide.

14. The photosensitive composition according to claim 9, wherein the semiconductor nanocrystals comprise CdS, CdSe, CdTe, ZnS, ZnSe, ZnTe, HgS, HgSe, HgTe, GaN, GaP, GaAs, InP,

InAs or a mixture thereof.

15. The photosensitive composition according to claim 9, wherein the semiconductor nanocrystals comprise at least two compounds selected from the group consisting of CdS, CdSe, CdTe, ZnS, ZnSe, ZnTe, HgS, HgSe, HgTe, GaN, GaP, GaAs, InP and InAs, and is a uniformly mixed type, gradiently mixed type, core-shell type or ally type.

16. A method for forming a semiconductor nanocrystal pattern, comprising the steps of: i) producing a semiconductor nanocrystal film using the semiconductor nanocrystals according to claim 1 or the photosensitive composition according to claim 9; ii) exposing the film through a mask; and iii) developing the exposed film.

17. The method according to claim 16, wherein the film of step i) is dried at 30-100℃ before exposure of step ii).

18. The method according to claim 16, wherein the film of step i) is produced by dispersing the semiconductor nanocrystals according to claim 1 or the photosensitive composition according to claim 9 in an organic solvent, and coating the dispersion onto a substrate by spin coating, dip coating, spray coating or blade coating.

19. The method according to claim 18, wherein the organic solvent further comprises a photoinitiator selected from a group consisting of acetophenone-, benzoin-, benzophenone- and thioxantone-based photoinitiators.

20. The method according to claim 16, wherein the light exposure is carried out at an exposure dose of 50~850 mJ/cm^2 through a photomask having a predetermined pattern.

21. The method according to claim 16, wherein the exposure is carried out using a light source having a wavelength range of 200-500nm and an energy range of 100-800W.

22. The method according to claim 16, wherein the development of step iii) is carried out using an organic solvent, a weakly acidic or basic solution, or water.

23. An organic-inorganic hybrid electroluminescent device, wherein the semiconductor nanocrystal pattern prepared according to the method of claim 16 is contained as a luminescent layer.